In the Claims

Applicant has submitted a new complete claim set showing pending claims.

1. (Previously Presented) A method for assessing a compound's ability to prevent neuronal cell death, comprising:

a) contacting a compound with cultured neuronal cells having activated MLK activity, wherein activated MLK activity is selected from the group consisting of MLK1 activity, MLK2 activity, MLK3 activity, and wherein the activity is a kinase activity; and

b) determining the number of cultured neuronal cells that die;

wherein a decreased number of dead cultured cells in the presence of the compound compared to the number of dead cultured neuronal cells in the absence of the compound is indicative of the compound's ability to prevent neuronal cell death.

2. (Previously Presented) The method of claim 1, wherein the neuronal cells are expressing a mutated protein selected from the group consisting of polyglutamine stretch-expanded huntingtin and C-terminal 100 amino acids of amyloid precursor protein, or the neuronal cells are treated with a neurotoxin to induce apoptosis.

3. (Original) The method of claim 2, wherein the neuronal cells are HN33 cells.

4. (Cancelled)

5. (Original) The method of claim 2, wherein the neurotoxin is glutamate, quinolinic acid or kainic acid.

6. (Original) The method of claim 1, wherein the neuronal cells are apoptotic neurons.

7-8. (Cancelled)

9. (Previously Presented) A method for assessing a compound's ability to prevent neuronal cell death, comprising:

a) contacting a compound with cultured neuronal cells expressing a mutated protein selected from the group consisting of polyglutamine stretch-expanded huntingtin and C-terminal 100 amino acids of amyloid precursor protein, or with neuronal cells treated with a neurotoxin to induce neuronal cell death; and

b) determining the number of cultured neuronal cells that die;

wherein a decreased number of dead cultured neuronal cells in the presence of the compound compared to the number of dead cultured cells in the absence of the compound is indicative of the compound's ability to prevent neuronal cell death.

10. (Original) The method of claim 9, wherein the neuronal cells are HN33 cells.

11-13. (Cancelled)

14. (Previously Presented) A method for assessing the ability of a compound to prevent neuronal cell death, comprising:

a) contacting a compound with cultured neuronal cells having activated MLK activity, wherein the activated MLK activity is selected from the group consisting of MLK1 activity, MLK2 activity, MLK3 activity, and wherein the activity is a kinase activity;

b) contacting, in the presence of the compound, surviving cells from step (a) with an agent that induces apoptosis; and

c) comparing the level of apoptosis in the cells in the presence of the compound with the level of apoptosis in the cells in the absence of the compound;

wherein the compound is a potentially useful drug for treating mammals when the level of apoptosis in the cells in the presence of the compound is less than the level of apoptosis in the cells in the absence of the compound.

15. (Original) The method of claim 14, wherein the apoptotic agent is a neurotoxin.

16. (Previously Presented) The method of claim 15, wherein the neurotoxin is glutamate, quinolinic acid or kainic acid.

17. (Previously Presented) The method of claim 14, wherein step (b) is performed by transfecting the surviving neuronal cells with nucleic acid encoding a mutated form of huntingtin or amyloid precursor protein.

18. (Original) The method of claim 14, wherein the neuronal cells are HN33 cells.

19-44. (Cancelled)

45. (Previously Presented) A method for assessing the ability of a compound to inhibit MLK activity and to prevent neuronal cell death, comprising the steps of:

a) contacting a compound with a MLK protein and a substrate therefor, wherein the MLK protein is selected from the group consisting of MLK1, MLK2, MLK3 and combinations thereof;

b) measuring the level of MLK activity, wherein the MLK activity is a kinase activity;

c) comparing the level of MLK activity in the presence of the compound with the level of MLK activity in the absence of the compound, wherein a decrease in MLK activity in the presence of the compound is indicative that the compound has an ability to inhibit MLK activity;

d) contacting the compound having an ability to inhibit MLK activity with cultured neuronal cells having activated MLK activity, wherein the activated MLK activity is kinase activity; and

e) comparing the occurrence of apoptosis in the cultured neuronal cells in the presence of the compound with the occurrence of apoptosis in the cultured neuronal cells in the absence of the compound; wherein the compound having an ability to inhibit MLK activity has the ability to prevent neuronal cell death when the occurrence of apoptosis in the cultured neuronal cells in the presence of the compound is less than the occurrence of apoptosis in the cultured neuronal cells in the absence of the compound.